



THOMAS G. NEWMAN, Editor.



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**Unite a Queenless Colony** with one having a good queen. Or if a queen is getting old or otherwise useless, replace her now. If you have no extra queen, it will pay to procure one to supersede the failing queen, for she may die during the winter and the colony perish in the spring for want of a queen.

**Ancient Honey.**—An exchange says that honey was a domestic manufacture of great importance before the introduction of cane sugar, and in those countries where cane sugar is scarce, the preparation of honey is very extensively carried on. It is not uncommon for a peasant of the Ukraine to possess 500 or more hives, and for a parish priest in Spain to have 5,000 hives in his apiary.

**Concerning the Observation Hives,** Huber remarks as follows:

Some persons may imagine, perhaps, that glass hives of four sides, are sufficiently adapted for exposing the construction of combs; but their architecture is always concealed from our view by clusters of bees, amidst which, and in darkness, the work goes on.

Huber never saw our new uni-comb glass hives for two reasons—first, because he was blind, and next because they did not then exist. These come nearer to it than did any in his day.

**"The Practical Bee-Keeper:** A compendium of Rational Bee-Keeping with movable and immovable Honey-Combs," is the title of a German bee-book which we have received from its author, C. J. H. Gravenhorst, of Glöwen, Prussia, editor of the *Deutsche Illustrierte Bienenzeitung*. The book contains nearly 300 pages, is beautifully printed on excellent paper, and has over 100 illustrations, among them being the faces of many eminent German apiarists. As it so thoroughly and practically covers the whole ground of bee-keeping, it no doubt will receive a hearty welcome by all who read the German language. Its cost is 4 marks (one dollar) per copy.

**Among the Many Uses for honey** we may mention the following:

It is used in the manufacture of Confectionery, Cakes and Pastry, Soda-water, Mead and Metheglin, Jellies and Jams, Honey-Wines and Liquors, Liquorice, Honey Egg-Foam, and Honey-Vinegar, Medicinal preparations, Syrups, Ointments and Salves, Pop-corn Balls and Harvest Drinks.

It is also used in canning and preserving fruit in its natural state, curing hams and meat of various kinds.

In making printers'-rollers it forms a principal ingredient, also, in the manufacture of beer, ale and tobacco, it holds a prominent place.

In making comb foundation it is used considerably.

In compounding medicines of all kinds, it has for ages held an important place; while as an article of food it has been esteemed as one of the principal delicacies for many centuries.

It will be well for all honey-producers to see if they cannot find out new avenues for the use of honey. In this way we can prevent a decline in prices when the future honey crops will be large. This is worth thinking about.

**Seasonable Hints.**—J. M. B., in the *Indiana Farmer*, gives the following as hints to bee-keepers who are apt to become forgetful of the wants of the bees. He says:

Bee-keepers should begin now, if they have neglected to do so, to prepare their bees for winter. This is the season to guard against robbers. The entrances to all colonies, the strong as well as the weak, should be contracted to better enable them to protect their stores. Strong colonies having unsealed stores are in almost as much danger of being attacked by robbers as those weak in numbers. Avoid opening the hives as much as possible except at evening after the bees are done flying.

As the past season has been poor for honey, there will have to be considerable uniting and feeding done this fall, which will require the greatest care to prevent robbing. It is not necessary to open each colony to know if they have honey enough to winter them. My plan is to lift each hive, marking those that need feeding. Should you have more light, weak colonies than you care to feed and risk in wintering, select those that have their hives full of combs, are strongest, and have young prolific queens, and commence feeding at once.

Those that are to be united should if possible be moved gradually up to those that are to receive them, and after their brood has all hatched, be united. Select some cool evening when no bees are flying to do your work, by shaking and brushing the bees down at the entrance, letting them run in.

If you have any choice of queens, kill the poorer ones of course, otherwise the bees will take care of that part of the work by killing one of them. Continue to run them in until the hive is full; have no fears of getting them too strong. You will find these same colonies to be weak enough next spring. Feed them until judging by their weight, they seem to say as the old German did, when asked to give a receipt for money paid him, "Yah—I ish full, I wants no more."

The empty hives and combs should be put away under shelter for next season's use.

**The Honey Consumer** is the name of a neat 45-page pamphlet on our desk, by Max Pauly, of Zurich, Switzerland. It contains many excellent recipes for using honey in cooking, for preserving fruit, and in making honey vinegar, mead, wine, etc.; also the uses of honey as a medicine. Its price is 70 cents per copy.

**Crops in General.**—In *Vick's Magazine* for September we find this statement of the result of the late drouth:

The heat and the dry weather the past summer have affected unfavorably most of the cultivated crops of this country. It has been a remarkable season on account of the high temperature which has prevailed, with but few intermissions, during the three months that have just passed. Over a large region of territory, from the central part of New York State westward to the Rocky Mountains, there has been for the same period a deficiency of rain, this deficiency being greatest in the States lying on the Mississippi River and westward, Illinois, Wisconsin, Minnesota, Iowa, Dakota, Nebraska and Kansas, and the region beyond have suffered most severely, but Michigan, Indiana, Ohio and the western half of this State have had their crops badly shortened by the same causes. An additional source of loss has resulted from the depredations of insects, favored by heat and dryness, which have bred with great rapidity. A short harvest of wheat, hay, grain and potatoes will be general, except in the Eastern and some of the other Atlantic States.

**Hold Back the Honey.**—If you want to maintain the advancing prices for honey—do not ship a pound for 5 or 6 weeks to come. Just read the following from Boston honey merchants:

Honey being so short, we thought 20 and 22 cts. per pound low enough to sell to the jobbing and retail trade, and we have sold none for less than 20 cts., except one lot of odd size comb.

We wish to second what you say editorially to the producers, in the *AMERICAN BEE JOURNAL*, to hold honey back for a month or two; and in that way good prices can be maintained right through the season. We are receiving a good many letters from all over the country, asking if we can sell their honey at prices quoted in the *AMERICAN BEE JOURNAL*, and we write them that at present we cannot advise shipment here, for if we should have it all come here, we could not sell for over 15 cts. per pound.

**The Display at the St. Joseph, Mo., Exposition,** in the Apian Department, was one of the finest we ever saw, and speaks well for the energy and perseverance of the Managers of the Fair, who were ably assisted by Mr. J. G. Graham, the Superintendent of the Apian Department.

The principal exhibitors were Messrs. E. T. Abbott, W. Z. Hutchinson, Elvin S. Armstrong, F. G. Hopkins, Sr., Wm. Kimball, J. G. Graham, and F. G. Hopkins, Jr., and included the finest exhibit of extracted and comb honey we have seen for several years.

In the line of edibles, two good exhibits were made by Mrs. George Doles and Miss Dora Abbott. These included cakes of many varieties, jams, jellies, cookies, snaps, fruit of various kinds preserved in honey, etc. The premiums amounted to \$287.00.

Of course we had a very pleasant time with the many apiarists attending the Interstate Exposition. They are generally enterprising and progressive.

To Messrs. F. G. Hopkins (father and son) we are indebted for pleasant drives all over the city, and among the adjacent hills, which are filled with residences—many of them very fine and luxurious.

**The Madison County Fair** will be held at Madison, Nebr., on Sept. 22, 23 and 24, 1887. Cash premiums for exhibits of bees and honey are offered. A premium list may be had by addressing the secretary, A. J. Thatch, Madison, Nebr.

## QUERIES

With Replies thereto.

[It is quite useless to ask for answers to Queries in this Department in less time than one month. They have to wait their turn, be put in type, and sent in about a dozen at a time to each of those who answer them; get them returned, and then find space for them in the JOURNAL. If you are in a "hurry" for replies, do not ask for them to be inserted here.—ED.]

### Worker-Bee in a Queen-Cell.

**Query 471.**—I found what appeared to be an inferior worker-bee dead in a queen-cell. Has any one noticed anything like it before?—Mrs. S. B. R.

Yes.—W. Z. HUTCHINSON.

I do not think of such a case at present.—H. D. CUTTING.

Yes. Take no notice of it, but go on about the practical work of the apiary.—JAMES HEDDON.

I have. Such bees are often found in inferior cells started with larvae over three days old; and sometimes a bee will enter a queen-cell after the queen crawls out, and the cap falls back and the bees close it in.—J. P. H. BROWN.

Yes, a worker sometimes gets into a queen-cell after the queen is hatched and is sealed up. Or, a poor queen, after being dead some time, might look like an inferior worker.—C. C. MILLER.

Yes, it is often the case that a worker-bee crawls into a queen-cell at about the time the queen leaves the cell, when the lid is pushed back and the worker sealed up a prisoner, death being the result.—G. M. DOOLITTLE.

I have often found dead worker-bees in queen-cells. They sometimes go in after royal food, stay too long, and are then sealed up. This is usually just after a young queen has emerged.—G. L. TINKER.

Probably the bee found was in reality an immature queen. I have never found a worker in a queen-cell, while I have often found a dead drone in one.—J. E. POND.

Yes, I have often seen the like. When a young queen cuts out of her cell, she does not always cut the cap entirely around, and the lid-shaped cap may spring back and imprison any worker-bee that may chance to enter the cell to lick up the surplus jelly at the base of the cell. Stranger still, I have known the bees to re-seal the cell, thus entombing the unfortunate victim beyond remedy.—G. W. DEMAREE.

Most likely a worker-bee was enticed into an empty queen-cell, which might have closed, and even been sealed up by the bees. Or, it might have been a poor queen, which, when dead, you may have mistaken for a worker-bee.—THE EDITOR.

### Securing Gilt-Edged Honey.

**Query 472.**—Can we secure gilt-edged honey in sections at the side, or on top, of old brood-combs?—Wm. M., Iowa.

Yes.—C. C. MILLER.

You can with care.—J. P. H. BROWN.

Yes, with a good honey-flow.—G. M. DOOLITTLE.

I have taken from the top of old brood-combs very fine comb honey.—H. D. CUTTING.

As a rule, we cannot; at least in my own experience. My bees insist on capping sections the color of the combs by their sides.—J. E. POND.

It is difficult to get sections entirely filled and sealed at the side. Old brood-combs are fit only for extracted honey.—DADANT & SON.

We can by "tiering up," as the finished sections are then so far from the brood-combs that the newly-finished combs remain unsoiled.—W. Z. HUTCHINSON.

Yes, if you will use the slat, break-joint honey-board which I have several times described, and which I invented 8 or 10 years ago.—JAMES HEDDON.

Yes, though sometimes the sections immediately following the old comb will be too dark. I have never noticed this trouble when they were placed above.—A. J. COOK.

I doubt if the cleanest and nicest comb honey can be had at the sides of old combs; but I can secure the very finest honey above such combs, by putting a perforated excluder between the top of the brood-combs and the bottom of the surplus case.—G. W. DEMAREE.

Not if very near old combs, especially at the sides of the hive. In fact, no comb honey, if left until it is sealed, can be obtained at the sides of new brood-combs without being more or less soiled. This is because the field workers that bring in all the dirt, congregate at night on the sides and bottom of the hives.—G. L. TINKER.

Yes, if the honey-flow is abundant; but not otherwise.—THE EDITOR.

### Hives with Beveled Joints.

**Query 473.**—Are beveled joints in hives, to keep out the rain, of any advantage?—H.

I use a square joint.—G. M. DOOLITTLE.

No. I prefer no bevel or rabbit whatever.—A. J. COOK.

Not with any hive I use. I prefer a rabbeted joint.—H. D. CUTTING.

I consider them a disadvantage. Rabbeted joints are preferable.—J. P. H. BROWN.

Any way to keep the rain out of the hives is good.—DADANT & SON.

Not any whatever, with me, and in some respects they are radically a disadvantage.—JAMES HEDDON.

I think not. No rain ever gets into my hives having square joints.—G. L. TINKER.

They might be if no bees were kept in the hives, but it makes but little difference what the joint is when the hives are occupied by bees, as they soon "plug" all cracks.—W. Z. HUTCHINSON.

They would be of no advantage in my apiary to keep out rain, and a very great disadvantage when manipulating the hive. I prefer the square joint all the time, and for all purposes.—G. W. DEMAREE.

In my judgment there are no advantages to balance the disadvantages. I have never had any trouble keeping out rain with square joints.—C. C. MILLER.

I so consider them; others do not; I think, however, they are so considered by the majority, judging from the opinions expressed in the discussions had upon the subject. If the old style Langstroth hive is used, they are not needed, and are only necessary where the covers or upper stories fit flush.—J. E. POND.

No; square or rabbeted joints are preferable.—THE EDITOR.

### Convention Notices.

The Eastern Indiana Bee-Keepers' Association will meet at Richmond, Ind., on Oct. 5, 1887.  
M. G. REYNOLDS, Sec.

The bee-keepers of Connecticut will meet in Room 50 of the State House, in Hartford, Ct., on Sept. 24, 1887, at 11 a.m., for the purpose of organizing a State bee-keepers' society. All are invited to come and "talk bees."

The Pan-Handle Bee-Keepers' Association will hold its next meeting in the R. of P. Hall, No. 1138 Main St., Wheeling, W. Va., on Oct. 26 and 27, 1887. All bee-keepers are cordially invited.  
W. L. KIRKBY, Sec.

The Kentucky State Bee-Keepers' Society meets in Falmouth, Pendleton Co., Ky., on Oct. 16, 1887. This is expected to be a very interesting meeting, and a large attendance is expected.  
J. T. CONNLEY, Sec.

The fifth annual meeting and basket picnic of the Progressive Bee-Keepers' Association will be held on Thursday, Sept. 23, 1887, at "Mountain Apiary," the residence of Mr. John R. Reed, near Chester X Roads, Geauga Co., Ohio. A cordial invitation is extended to all who are interested in bee-culture to be present. A full attendance of the members of the Association is desired.  
MISS DEBA BENNETT, Sec.

Union Convention at Chicago.—The North American Bee-Keepers' Society and the Northwestern Bee-Keepers' Society will meet in joint convention at the Commercial Hotel, cor. Lake and Dearborn Streets, in Chicago, Ills., on Wednesday, Thursday and Friday, Nov. 16, 17 and 18, 1887. Arrangements have been made with the Hotel, for back room, one bed, two persons, \$1.75 per day, each; front room, \$2.00 per day each person. This date occurs during the second week of the Fat Stock Show, when excursion rates will be very low.

W. Z. HUTCHINSON, Sec.

When Renewing your subscription please try to get your neighbor who keeps bees to join with you in taking the BEE JOURNAL. It is now so cheap that no one can afford to do without it. We will present a Binder for the BEE JOURNAL to any one sending us three subscriptions—with \$3.00—direct to this office. It will pay any one to devote a few hours, to get subscribers.



## Correspondence.

This mark © indicates that the apiarist is located near the center of the state named; ♂ north of the center; ♀ south; ◊ east; ◊ west; and this ◊ northeast; ◊ northwest; ◊ southeast; and ♀ southwest of the center of the State mentioned.

For the American Bee Journal.

### Legal and Moral Checks in Bee-Keeping

WM. F. CLARKE.

I find little to dissent from in Mr. Foster's article on page 535. He summarizes the points of agreement between us exceedingly well, and accepts my position that, "respect for the rights of others and self-interest are the best checks" to overcrowding of bee-fields. I readily admit "that these checks sometimes fails to operate." So do legal ones. Everything human is imperfect.

Mr. Foster states very clearly a case in which a bee-keeper may desire and be entitled to control of territory on other grounds than that of prior occupancy, and says, "it seems impracticable" for me to allow this point. But this is not so "impracticable" as it seems. I "allow" it, here and now. If I have written anything inconsistent with such an admission, I withdraw and retract. I can do so without shaking my position in the least. For this case is one to which a legal check cannot be applied. A farmer who owned only a few "bee-gums" would not want a monopoly of the territory, and would have no right to it, unless prepared to stock it. A just law could not endorse and protect any "dog-in-the-manger" policy. I have argued that prior occupancy, giving a sort of pre-emptive right, is the only ground on which law could recognize a claim to exclusive possession of territory. It would be monstrous if a specialist could come into a neighborhood and say to "one or two farmers" owning a few "bee-gums," "Take your bees out of this,

"I am monarch of all I survey,  
My right there is none to dispute."

this bee-territory is mine." Moreover it would be entirely unnecessary. For, "one or two farmers who owned a few 'bee-gums,'" would only amount to a "fly on my horn" rivalry, beneath his notice.

Farmers have, before now, gone in to other lines of business beside bee-keeping and given them up in disgust, when "a well-managed monopoly would have saved them hundreds of dollars." Hop-growing is one of them, and others might be named. Citizens of a free country would resent legislation forbidding them to go into any line of business at which they were likely to lose money. To start a business without a knowledge of it, argues a want of common-sense. Law cannot supply that lack. The President of a certain theological college used to say to every new class

of students, "Gentlemen, if you lack knowledge we can supply you; but if you haven't common-sense, it is of no use your coming here." There is no need of any human legislation in favor of the "survival of the fittest." The "higher law" everywhere in force infallibly secures that, as a matter of fact, what Mr. Foster desiderates, is actually realized. He says: "The utilization of our honey resources should be entrusted to those who are best qualified to accomplish it, without regard to priority." So they are, and so they will be, under the operation of natural forces and independently of legislation. Sooner or later he who lacks qualification takes a back seat, and "those best fitted" come to the front.

Mr. J. O. Shearman, on page 537, rushes into the arena of discussion in a manner calculated to over-awe a timid person. He claims that "no one has come to any conclusion what is best to be done." I have been fluent, that is all. So is a Billingsgate fish-wife, or a quack-medicine peddler. He says that I have "shoved Mr. Foster aside," a soft impeachment to which I plead "not guilty." If I have done any thing so uncivil as that, I most humbly beg pardon. He insists that I propounded nothing. What I had to say was mere "fluency," only that and nothing more. Mr. Foster, he claims did at least "break the ice." He proposed "something to be done, even allowing its possible impracticability." Well, now, that is harder on Mr. Foster than on me. I am patted on the back for my "fluency," and Mr. Foster for his "impracticability." We can only be thankful for small favors in the way of compliments, and Mr. Foster for the smaller of the two.

But Mr. Shearman asks, "Did Mr. Clarke get any farther or as far toward a solution of the problem?" Mr. Foster shows that I got as far as he did, and I contend that I got farther. I did certainly arrive at "a conclusion what was to be done." It was to leave the matter to respect for the rights of others, and a wise regard for self-interest. Does Mr. Shearman get any farther, or as far? No. He proposes half-a-dozen points of legislation, but not one of them touches the question at issue. His "idea in regard to legislation" has no bearing whatever on exclusive right to the occupancy of bee-territory. He would prohibit hives of bees being kept within 4 rods of a public highway without a close fence 8 feet high between the hives and the highway. All right, Mr. S., but what has that to do with what we are discussing? He would have a conspicuous placard warning people not to tie horses near hives of bees. All right again; but how does this bear on the territory question? He would protect owners of improved strains of bees, by excluding "native or grade bees"—by the way, are not "grade bees" improved strains? but what has this to do with the main issue? These amendments are out of order. They are not relevant to the issue. I move the previous question.

Mr. S. does not see how any one can be legally prevented from keeping bees or anything else on his own premises, except on the grounds of being a nuisance or a hindrance to public improvement in some way. Nor do I. So the matter must be left to the moral checks for which I have contended, though as I have said, they are like the air-brakes on a railway train, which do not always hold, but, in the meantime, we have nothing better. If regard for the rights of others, and self-interest will not suffice to prevent over-stocking, there is no prevention for it.

I am of the opinion that Mr. L. C. Root's article on page 535 contains one of the solutions of the difficulty which will be adopted in the bee-keeping of the future. The ground he takes is what I have occupied ever since I began to write about bee-keeping. I have contended that apiculture, like dairying, is a legitimate part of farming; that every farm should have a few colonies of bees on it, and is not completely equipped without them. Bee-keeping specialists put all their eggs into a single basket. The past season has been a bad one for the eggs, and its relentless logic will convince many that they had better combine some other business with bee-keeping, so that when the honey crop fails, they may not be wholly "left." When bee-keeping is carried on conjointly with some other branch or branches of husbandry, there will be an end to over-stocking.

Guelph, Ont.

For the American Bee Journal.

### Coral-Berry or Indian Currant, etc.

O. N. BALDWIN.

I send a sample of what we call wild rice. What its true name is we do not know, but submit the sample for information. The bees (Italians and hybrids) work on it constantly from early in May, when it first commences to bloom, till frost robs it of its blooms and foliage. It grows in great bunches 2 to 4 feet high, about fence-corners, or, in fact, wherever it gets root, and it is next to impossible to get rid of it when once it is well started.

This plant blooms every year, and has berries the shape of an inflated balloon, of a pale red color, and about the size of the slug in a No. 22 cartridge, with very few seeds nearly the shape but about one-fourth as large as a tomato-seed. The bloom is a pale blue, tinted with pink, and there are thousands of these on each plant. Black bees hardly, if ever, notice it, but bumble-bees, Italians and hybrids can be seen upon it from early dawn until late at night.

There is not enough of the plant here to tell to a certainty what the quality of the honey is, but from our closest observation we think that it will nearly, if not quite, equal white clover. The drouth or floods have no

effect on it, and it will flourish wherever its roots catch; even in old, rotten logs, in dry, cemented cellar floors, etc.

#### THE SEASON OF 1887.

We have had a wonderfully bad season here; failure is stamped on everything in connection with bee-culture this year. I put 80 colonies in the cellar last fall, and took out 79 alive in the latter part of March; the one that perished was very strong, and not being allowed enough ventilation, their perspiration drowned them.

Last fall was also dry here, and my bees gathered only sufficient to carry them through to April. I had to feed them, which I did, using the formula, given in the BEE JOURNAL, by Mr. N. W. McLain. I was very successful with it, as the bees bred up more rapidly than I ever had them before, and when the first white clover bloom came, my bees were in an excellent condition.

There was a little flow of honey, and I ceased to feed, thinking, as in years past, that the harvest had opened; but the bees did not get honey enough to keep up the vast amount of brood being reared; so they commenced to dwindle down till there was scarcely a quart in each hive, on an average, and about 10 colonies actually starved to death! These were blacks! I saw that at this rate in a week or two more I would not have bees enough left "for seed," so I commenced to feed what was left. I gave them all they would use for four weeks, and now I have 55 colonies in good condition, with young, pure Italian queens of the best stock obtainable, having pinched the heads off of all old queens, and of those that did not come up to the standard.

For 15 months we have not had enough rain to wet the ground. In digging graves here to the depth of 5 feet, the earth was void of moisture, and would crumble up as dry as powder. We had a sprinkle last week about like a heavy dew, but by 10 o'clock the next day one could not have noticed that it had rained any at all.

We have had four or five such rains this season. The meadows are burnt up, stock is suffering for water, and the cisterns have nearly all been dry for a month. The prospect for fall bloom is very poor, and we will probably have to feed until next June, for rains now would hardly do us much good this fall.

The sweet clover seed that I sowed two years ago did not grow. I sowed about five acres, and I have seen but one plant from the whole of it. This one plant has been covered with bees for two months, and if it had all grown, my bees would have had fine pasturage.

Clarksville, O., Mo., Sept. 6, 1887.

[It is *Symphoricarpos vulgaris*; and its common name is coral-berry, or Indian currant. It is excellent for honey.—ED.]

For the American Bee Journal.

### A Lesson from the Honey-Bees.

JOHN JAMIESON.

Little, busy, humming bees,  
Nothing can me so well please,  
As to watch your cunning ways,  
On the bonnie, sunny days;

In and out, and out and in,  
How I love your pleasant din,  
Gathering honey from the flowers,  
In the sun and shady bowers.

Flying far to get your load,  
Never missing the right road;  
Drop on the alighting-board—  
In a trice the honey's stored.

Matters not how far you roam,  
Seldom visit others' home.  
Interesting little thing,  
But for that mischievous sting,  
Given, no doubt, for self-defense,  
Should be used with common-sense.

No matter how good and kind,  
Sting the same, remaining blind;  
Sting their owner, or a king,  
Just as soon's the meanest thing.

When a fellow comes to steal,  
Then he might the venom feel;  
Sometimes pleasant, sometimes cross,  
Sometimes profit, sometimes loss.

For the winter they lay up,  
Man steps in and takes his sup;  
Sometimes takes it all, O, fie!  
When Jack Frost comes, bees will die.

Let not the love of money  
Prompt to steal all the honey.  
In our moments of leisure,  
Tending bees is a pleasure.  
In handling, sometimes they sting—  
"Keep cool," that success will bring.

Treat them kindly, work with care,  
And you will the better fare.  
New bee-veil, and gloves protect:  
For such helps, we have respect.

After all, 'twill take some years,  
To remove our stinging fears.  
Lovely mother of the throng,  
Cheering with her queenly song;

Never leaves her own dear home,  
Having no desire to roam;  
Only for the "wedding ring,"  
And the early swarm in spring.

Learn a lesson from the bees,  
And the flying moments seize;  
Gathering in our winter stores,  
Then care not how loud it roars;  
And when this short life shall end,  
Soar to meet our Heavenly Friend.

West Toledo, Ohio.

For the American Bee Journal.

### The Production of Comb Honey.

G. M. DOOLITTLE.

In reading Mr. Theilmann's article on pages 552 and 553, I am led to think that my plan of working for comb honey is not understood by him, and perhaps not by hundreds of others.

Mr. T. says that Doolittle "practices side-storing," while the truth is that I never did such a thing, in the full sense of the word. Nine-tenths of all the honey I ever obtained was stored at the top of the brood-chamber, and the sides were only used for comb-building. Try to get around it as much as I may, the fact still remains, that bees will build comb much faster at the side of the brood than at the top; while the fact is equally prominent, as Mr. T. says, that bees prefer to store their honey

at the top. Putting these two facts together, I was led, 14 years ago, to adopt top-storing in connection with side comb-building, or "side and top boxing combined," as I have termed it, the results of which I am not ashamed to lay beside any 14 years' record of any apiarist in the world.

Now how have I worked this plan? Although I have branched out in many directions (giving each in the BEE JOURNAL in years past) to see if I could not improve upon the honey yield, yet my method of working has generally been as follows:

As soon as the honey season opened, the packing was taken from the top of the hive, and about one-half of the top-room to the hive covered with separated, single-tier, wide frames, the wide frames being filled, or partially so with sections full of comb left over from the previous season. As soon as the bees were well at work in them, they were spread apart and wide frames of sections containing starters of natural comb or comb foundation alternate between them, till the top of the hive was covered. In about a week more, or as soon as the bees begin to cap the first sections put on, the packing is taken from the sides of the hive, and wide frames of started sections placed on either side.

As soon as any honey of any account is ready to come off the top of the hive, these side sections are filled with comb containing a little honey; very little in the lower tier, but more in the upper ones. As I take off the finished sections at the top, the sections of combs are raised from the side to the top, where the bees soon fill them with honey, while they are building more comb at the sides in empty sections, or started sections, which are put in at the same time the others are raised to the top. In this way I keep on until the honey season draws toward a close.

At this time, when the wide frames of sections are raised to the top, the bees are shut from the sides so as to throw the whole force of bees and honey to the top. In this way I get most of the sections finished for market, having only enough unmarketable ones for the early start the next year.

By the above it will be seen that Mr. Theilmann's term, "side-storing," cannot be applied to my plan, and as far as pollen in honey in sections is concerned, I have had scarcely a dozen such sections in all of my experience as an apiarist.

That the above described plan requires rather more labor than some of the other plans, I am free to admit, but when it is considered that all sections are handled by the wide frame full, the labor is not so much greater than by some of the quicker plans, as a few would have us think. Then if we take into account that more honey can be secured by the above plan (which I firmly believe), than by any known plan, this labor problem has little to do with it, for the extra honey obtained pays for the extra labor.

One great reason why I object to nearly all of the case and non-sep-



arated plans, is because we are obliged to put on just such an amount of surplus room, or none. This amount is generally too much on the first start, and tends to discourage the bees, rather than invite them into the sections. With the wide frame plan, as above, the amount of room can be gauged to the want of the bees every time, giving a range of from 5 to 65 pounds.

For the past two years I have been trying top-storing on the lateral plan, instead of by tiering up, and I must confess that so far I am very much pleased with it—so much so that I am thinking of giving up the side comb-building part entirely. The plan of working is to put on a small amount of room at first, the most of which is sections filled with comb. This with the contraction system gets the bees into the sections with the very first of the honey-flow, and entirely prevents the crowding of the queen with honey in the brood-chamber. As soon as the wide frames of sections first put on are partly full, place more at both sides of these, or enough room to last until the first are finished. When any are full, take out by the wide frame, and bring the partly filled ones to the centre, adding empty room at the sides of the partly-filled sections. In this way I have secured splendid results with as little labor as any of the known plans can boast of.

Borodino, © N. Y.

British Bee Journal.

## Foul Brood & Dead Brood—Difference.

S. SIMMINS.

Again and again this subject crops up, and one hears of whole districts plagued with the dreaded malady. Dreaded, I say, because it is now, and ever will be, a dark cloud hanging over our industry, when we consider what a number of bee-keepers there are who cannot, or do not care to take the trouble to put a stop to it.

Was not Mr. Cheshire's remedy to drive the scourge from all apiaries? and did we not hail his discoveries with rejoicing? Yet why is it so few have been able to cure by the phenol treatment, and others report that it is of no use? The present state of things shows that either the treatment is not carried out as Mr. Cheshire has advised, or else that he himself overlooked some factor which gave him an advantage; while his followers have been unable to grasp the entire subject in consequence of this one point not being brought before their notice. The fact is, my esteemed friend does appear to have overlooked a matter of the greatest importance which gave him a decided advantage over those who attempt to follow him.

It will be remembered that Mr. Cheshire had a very badly diseased colony provided for experiment, and it is in just such a state that many allow their colonies to get before they become aware of the trouble. But note this: there were very few

bees and no queen. And what did Mr. Cheshire do? He gave them a young healthy queen and two frames of clean brood. Why, reader, here was health to start with, and then by feeding constantly with medicated syrup, the operator would have it all his own way.

The healthy bees would have little trouble in removing the disinfected foul brood, as I am aware from the fact that under certain conditions the original inhabitants will clear out the filth without it being disinfected. During my own experience some ten or twelve years since, I found that a populous colony would throw out every vestige of diseased brood, if the queen were removed. I have also found since, where any bees happened to be brought having the disease, that by removing the queen and inserting a queen-cell (from a clean colony) on the point of hatching, every particle of the putrid matter has been removed by the time the young queen was ready to breed; the disease again appearing, but with less virulence, until medicine was given.

It will be readily seen, therefore, that where a bad case will not give way all the time, the original queen is allowed to continue, a change to a young and vigorous mother will impart energy and determination to the workers, and then Mr. Cheshire's remedy will never fail.

Where the bees are so reduced as to be unfit for brood-rearing, of course they are not worth the addition of a new queen and more bees or brood, but should be immediately smothered, and the combs burned or reduced to wax. On the other hand, it will probably be found that when a colony is not very badly infected, the feeding of phenolated syrup, or its injection into the cells when the bees will not take it, will be found effectual without removing the queen. Another point which appears to have escaped notice is, that all sealed honey must be uncapped and likewise disinfected, or the disease is likely to reappear from time to time. Where there is much sealed honey, uncapping a portion only at a time, and if possible do not contaminate the extractor.

What is done should be done thoroughly, and experiments left to be carried out by those who can afford the time, and have nothing to fear from risk of infection.

Mr. Ward, of Highgate, when visiting my apiary, stated that he failed to cure with phenol until the original queens were removed from his infected hives, and others from a clean colony inserted. Notwithstanding, therefore, that Mr. Cheshire considered it a great disadvantage to have received his diseased colony without a queen, it was the one thing that ensured success, in that he gave a healthy queen as well as clean brood.

It would appear, therefore, that when a queen is badly diseased, the phenol treatment does not renovate her impaired constitution. The workers probably are cured by taking the medicated food; but just here is the point: Does the queen, or does

she not, receive the phenol in the food prepared for her by the workers? Perhaps Mr. Cheshire will pursue his investigations further, and benefit us all by giving some definite information upon this point.

That phenol is a cure for foul brood is certain; that it gives health to the workers appears equally true; and that in the future it will prove effectual in every case, I feel convinced, if the queen is superseded when the disease does not at first give way.

### DEAD BROOD.

That foul brood is often confused with simple dead brood, I am well aware. The latter I have observed occasionally, and have never allowed it in any way to interfere with necessary manipulations, such as uniting, queen-rearing, etc., as I have no fear of communicating disease. At present I am unaware of any cause for this, unless it be weakness of the queen, as by inserting a fresh one, all is cleared out, while no more is found, and no medicine is necessary.

How to distinguish between the two: In some respects the two are similar, much of the larvæ turning rotten, and of a dark color, while the bees seem unable to remove such as is in that state, until the weak queen is taken away. Nevertheless, some of the matter being placed under the microscope, Mr. Cheshire was unable to find the slightest trace of disease.

But that every bee-keeper may decide for himself without the aid of a microscope, which is the genuine foul brood and which not, I will show how I have always been able to detect the difference. With simple dead brood, while some may appear like the foul disease, much of the older brood dries up to a white cinder, in many cases retaining its original form, which I have never found to occur when genuine foul brood is present. Chilled brood can be distinguished from the more serious malady in like manner.

Rottingdean, England.

For the American Bee Journal.

## Making Honey-Vinegar.

W. G. FISH.

EDITOR BEE JOURNAL.—You would confer a favor on perhaps more than one if you would publish all the really practical articles and directions on making "honey-vinegar." Get them all in a condensed form in one issue.

Ithaca, © N. Y., Sept. 6, 1887.

[As requested, we have summarized the matter on making honey-vinegar and present it in a condensed form below.—ED.]

### THE MUTH METHOD.

When making vinegar, one must know that water will turn into vinegar providing it contains the necessary quantity of sugar, and is exposed to fresh air and a warm temperature. The warmer the temperature and the better the circulation of air, the sooner vinegar forms. A barrel is laid down,

and an inch hole is bored in the upper end of each head, near the upper stave. This admits of a good air-passage over the body of the honey-water. Tins with fine perforations nailed over these holes, with the rough side outward, exclude flies and skippers.

Take about one pound of honey to one gallon of water, thoroughly mixed up, and nail a perforated tin on the bung hole. We take 35 to 40 pounds of honey for a barrel containing 40 to 45 gallons of water. The warmest place in the yard is the best place for the barrel. If the sun shines on the barrel all day, it requires from the beginning of April to the end of October to make vinegar satisfactory for all purposes. If not sour enough by fall, it will be all right by Christmas or spring, if placed in the cellar or a warm room.

#### THE BINGHAM METHOD.

To one gallon of the best vinegar, one pound of honey and one gallon of water is required. That is, 29 pounds of honey will make (water being added to it enough to fill a regular 32-gallon barrel) one barrel of the best vinegar. The vessels I use to make it in are common alcohol barrels, which I find at drug-stores. I saw out one of the barrel heads and paint the outside to prevent the iron hoops from being destroyed by the vinegar.

The barrels and vinegar are kept in my house-cellar, so covered with burlap as to keep the dust out and let the air in. One year converts this water and honey into the choicest vinegar.

Sweetened water from washing honey-cappings is the most common waste of the apiary, and to utilize it, is presumed to be the desirable matter in connection with honey-vinegar.

To know how sweet-water slowly sweetened and constantly fermenting should be, is one of the difficult features of converting the washings of cappings into vinegar. An instrument used by brewers, known as a Saccharometer, would, of course, show the amount of honey in the water, even if the taste did not fully determine the increasing sweet in the water as it was souring. I have made a cheap instrument to be used by those who wish to know how sweet water should be for vinegar, and may be relied upon as permanently accurate for such test.

#### BINGHAM'S VINEGAR-TEST.

Take of clean yellow beeswax, one-half ounce, and two ordinary shot,  $\frac{1}{8}$  inch in diameter. Warm the wax until it is soft, and put the two "shot" into the center of the piece of wax, as nearly as convenient. Make the wax into a ball like marble. Its upper surface will rise to the surface of the vinegar or water containing one pound of honey per gallon—just the amount needed for the best vinegar.

Vinegar made of honey may be evaporated, and the honey will candy in the residuum, and may be so reclaimed when honey is more prized than vinegar.

For the American Bee Journal.

### Experience with Bees—Ancient Honey

JOHN JAMIESON.

My wife and I are both well advanced in years, and we thought a few colonies of bees would be pleasant and profitable employment; and would be a change from the routine of the farm.

All that other folks can do,  
Why with patience may not you?  
Only keep this rule in view,  
Try, try again.

We are both Scotch, and have enough of "Wallace" and "Bruce" grit, not to cry over a sting. We get one now and then, but I suppose we will get used to it by degrees. My wife and son can handle the bees better than I. All the bees know about is, to gather, hide and eat honey. They cannot discriminate between friend and foe.

In the spring we got two good colonies. We had two first swarms in June, and two after-swarms in July. We put supers on the hives of the old colonies, and they have honey in both stories. We have no reason to complain considering the poor season. I think both the after-swarms already have more honey than they need for the winter. I have made a hive for observation, and if I can winter the bees, and I am spared to see another spring, I shall put my first swarm in it, and peep in now and then, and see them operating.

Honey is a nice thing to have. Keeping bees is one of the ways to get a share of the good things of this life. Samson, the strong man, partook of honey on his way to Timnath to see his girl. Was it not Providential? It was from a pretty rough hive, too, the carcass of a lion. That was honey in the comb!

That was not the age of extricators, exuders, extruders, emitters, evolvers, slingers, throwers, or even extractors. Samson and his father and mother used the oldest "extractor."

I agree with the editor in calling honey out of the comb, "honey" or extracted honey, and the other kind, "honey in the comb." Who does not know what extracted honey is? If all the lexicographers from Dr. Johnson till our own time, were assembled to-day, to decide the thing, I believe they would all say "extracted." It is from a Latin root, *trahere* and *ex*, which really means "drawn out of." What could be more emphatic? That is quite a digression from the use of honey.

Jacob sent a little honey with his sons to the governor of Egypt. It is mentioned among the merchandise of Tyre. John the Baptist used honey. Jesus and his disciples often used honey. In the "good old book" frequent mention is made of honey. Canaan was the land that flowed with milk and honey. In Palestine honey, no doubt, was an article of daily consumption. Honey is both nutritious and medicinal.

If all who spend their money for beer and other alcoholic drinks and

tobacco, would eat honey, how much better off they would be. It would add to the national vigor both of body and mind. Alcoholic drinks and tobacco are positively injurious, whereas honey is a blessing.

Bee-hives are quite a lawn ornament. All my life I have loved bees, although I never had a good start till now. In Scotland, when I was a boy, I remember carrying bees out in the country many miles, on a wheelbarrow, to gather honey from the heather, a wild furz that grows in the moors in Scotland. That made the fall honey, just as the buckwheat does among us.

West Toledo, O.

For the American Bee Journal.

### Twelve Proverbs for Bee-Keepers.

HENRY K. STALEY.

The following is an article taken from *Coleman's Rural World*, and as I have seen it published in but two papers, I think that the AMERICAN BEE JOURNAL should have it too; for its truth is self-evident truth, and it may in some degree help those who, uninitiated, intend to embark in bee-keeping. It is as follows:

#### PROVERBS PROVEN BY EXPERIENCE.

1. The ways of bee-keeping are not all ways of pleasantness, nor are all the paths thereof the paths of peace.
2. Man is to eat his bread in the sweat of his face, and there is no exception made in favor of the bee-keeper.
3. To work successfully a man must work wisely. To work wisely with bees, one must know their nature and habits; these can be learned only by careful study and observation.
4. We live in progressive times, and the true bee-keeper must be progressive.
5. In bee-keeping, as in other things, the diligent are crowned with success.
6. The obstacles in the way of successful bee-culture are ignorance, carelessness, being too eager to increase the number of colonies, and cold winters.
7. A fair knowledge of bees, faithful attention to the apiary, and a thorough and timely preparation for the honey-flow, swarming and wintering, will make any man or woman a successful bee-keeper.
8. A tyrannical Pharaoh demanded of his workers the "full tale of bricks," but furnished them no straw. Do not demand of your little workers "the full tale" in pounds of honey, when there is none in the fields, or when you reside in a region poor in honey-yielding plants.
9. Carefully lay up your honey crop where thieves (especially robber bees) cannot break in and steal, and your empty combs where moth-worms will not destroy them.
10. Profitable bee-keeping greatly depends upon a gathering up of the fragments, that nothing be lost. Fragments of time can be used in caring



for bees; fragments of lumber in making hives and frames; fragments of combs for wax; and every drop of honey is useful; even though mixed with dirt, it can be fed to needy colonies.

11. Some bee-keepers seek their profits in rearing bees or queens to sell; but remember that the true aim of bee-keeping is to supply the market with delicious honey.

12. Live not for self. Make your knowledge profitable to others seeking to learn bee-keeping, that the coming generation of bee-keepers may excel the present, increasing in numbers and in knowledge, until every pound of honey secreted by the unnumbered flowers of our land is gathered.

In the first place, even those most ignorant anent the ways of bee-keeping, who intend to embark in that pursuit, will by a careful reading and digesting of the above truths, come to the conclusion that "all's not gold that glitters;" and that they cannot be carried through bee-keeping "on flowery beds of ease." That nice, lovely, mellifluous article, viz: anent the vending of honey at 50 cents per pound, would glitter like gold to one to whom ignorance of the apiary is bliss, and the consequence is, he starts in with conceit, money and experience in the following proportion: Conceit, 0; money, 0; experience, 0; and come out in the "little end of the horn" with—experience, 0; conceit, 0; money, 0.

Mr. Ralston, the author of these proverbs, says: "Nor are all the paths thereof the paths of peace;" especially I think so when one gets a *stinger* on his eye-lids, and have those sight-seeing orbs closed up; and then seek some sombre room—a soothing panacea for him—to hide the vista of his face from callers, and I cogitate that the novice, induced by flowery statements, would trow so too.

I wish that every person who starts in bee-keeping—especially those induced by mellifluous statements—would make a careful perusal of these twelve proverbs; and I am of the opinion, if they follow them out strictly, they would not become disgusted and fail; and albeit they do fail, not then to take out their spite on the innocent bee by concocting hideous lies anent sophisticated comb honey; nor execrate the honey-bee—that wonderful caterer of envied sweets, and also one of Nature's grandest pieces of mechanism, which by its work, purveys work for thousands of people.

Mr. Ralston has truly brought out that adage, viz: "The maximum of thought in the minimum of words," anent bee-keeping; that all beginners should try his proverbs, and that with a colony or so *ad libitum*, every day they have the chance.

As the whirlpool sucks down its prey insatiable, so do failures in bee-keeping suck down many of those palavered by sweetened and flavored statements about bees, such as—O, I need not reiterate.

Pleasant Ridge, 9 O.

Exchange.

## Wintering Bees in the Cellar.

EUGENE SECOR.

That protection of some sort is necessary, in our rigorous Northern climate, is admitted by most bee-keepers, not only on the ground of kindness to the creatures that God has given us dominion over, but also because it is economy to furnish it. Even if they would winter out-of-doors, and unprotected, the saving in honey consumed more than pays for the protection afforded, for the reason that a warm stable has advantages over the sunny side of a barb-wire fence, in wintering a cow.

I do not know how it may be further south, but for this latitude and longitude, I believe there is no place so safe and so cheap, in which to winter bees, as a good cellar. Some people have "gone wild" over chaff-hives, and packing on the summer stands, but I think the statistics of losses have been in favor of cellar-wintering. If they cannot be wintered successfully in a good cellar, the temperature of which never gets so low as to freeze potatoes (it ought to be 10° above that), I do not believe they can be carried safely through by any system of packing yet devised.

So far as my observation extends, when severe losses have occurred in cellar-wintering, they can be traced to two causes: first, putting them in too late in the season, when the hives were full of frost; or, second, allowing the temperature in the cellar to get too low.

A great many seem to think that because bees will sometimes live out-of-doors, in a temperature at times below zero, they can certainly stand it in a cellar considerably below freezing, without harm. While I may not be able to give a satisfactory reason why this is not so, facts are stubborn things, and it is useless to resist them, simply because they do not accord with our preconceived notions. Any one who has spent a winter at the sea-coast will admit that a humid atmosphere is much more penetrating than a dry one, and a good deal colder. I do not believe that a damp cellar is any disadvantage if warm enough (say 45°).

Out-of-doors, bees will endure very severe cold weather, if not of too long duration. If it would moderate enough for them to break the cluster and get to their stores, they might winter reasonably well without any protection (consuming more honey, of course), but in a climate where the mercury stands below zero for weeks at a time, they might starve with plenty of honey in the hive.

If the cellar is just as safe a place to winter bees as out-doors, packed in any way the bee-keeper chooses, it certainly has economy to recommend it. It is no small job to prepare, and no light expense to maintain, double-walled hives for out-door wintering.

In bee-keeping, as in any other business, the least money tied up in permanent fixtures, consistent with

true economy, the better. The value of a colony of bees consists chiefly in the queen and her retinue of workers, and not in the costly hive they live in. If wintered in the cellar, no extra capital need be invested in double-walled chaff hives. The labor of putting them in in the fall, and taking them out in the spring, is so light and insignificant as to scarcely need mentioning. Two men can easily handle 50 colonies in two hours.

Another advantage in cellar-wintering is, that every hive must be handled twice a year, and if light in weight, the manager will surely detect it without the trouble of putting it on the scales, and can supply the deficiency.

The above are some of the reasons why I believe in cellar-wintering.

It will pay to keep a thermometer hanging in the cellar, and not allow it to go below 35°. Keep the cellar perfectly dark, and perfectly quiet, except to look at them occasionally, if need be. Leave the entrances wide open, and occasionally clean out the dead bees. Destroy all mice, or they will destroy the colonies.

Forest City, 3 Iowa.

For the American Bee Journal.

## The Cause of "Bare-Headed" Brood.

H. E. HILL.

Mr. Erslev's article on page 569, contains some instructive points, but the "bare-headed" bees referred to by our friend "across the sea," is quite different from that of which I wrote. It is not uncommon to observe the effect of the moth-worm among the brood of black bees in America, either.

Their path may be easily traced running in a direct line with the rows of cells, diagonally across the comb, or, sometimes, branching off as gracefully as the leaves upon a frosted pane, according to their stage of development at the time of being attacked, some having never been sealed. Those further advanced have the cappings mutilated by the bees, so as to present a white appearance. The dark head of others may be faintly seen through the semi-transparent cocoon which has been gnawed nearly through; and occasionally one or two may be seen emerging from the cell, evidently sooner than was required by law (of nature).

These bleached, delicate baby bees crawl and drop about, often with a particle of web still adhering to the tip of the abdomen, showing that the posterior had been enveloped in the web of the moth at the septum of the comb, until they are carried out to die. These are, in reality, as much "bare-headed" bees as any, but on a much smaller scale, and of a decidedly different nature.

When one draws three or four combs from a hive and finds every cell open, exposing to view brood in all stages from the egg to bees emerging fully developed, and other colonies the same or in a similar condition,

some having a part of two or three combs uncapped, containing brood in the last stage, others with but a small percentage of the advanced brood capped—noticing this in 20 out of 200 colonies for a whole season, as the bees emerge to see eggs placed in the cells hatch and mature, and the operation repeated over and over again; *which is the case*, he would at least be justifiable in saying that if the wax-moth is at all instrumental in producing this state of affairs, its dealings are not "direct."

With regret I confess my inability to give any explanation of the cause. I simply stated facts as they appeared to me. I have not even a theory to advance, though personally I am satisfied that it is a freak, rather than disease, which characterizes the progeny of certain queens.

Doubtless some of our veteran apiarists have had some experience with the phenomenon in question, and could, without difficulty, explain the cause, or at least favor the public with their views. I should like to hear from Mr. Osburn, of Cuba, on this subject; or from any one that has had any experience with "bare-headed" brood.

Titusville, Pa.

Read before the Florida Fruit Association.

### Interesting Facts about Honey-Bees.

JAMES M. LISENBY.

The great secret of success in bee-keeping is simple and thorough management. This can only be accomplished by a complete understanding of the nature, habits, and requirements of the honey-bee, combined with labor, study, and experience in handling them, and a mechanical knowledge of the construction of hives that will give the greatest profit with the least outlay of money and labor.

Everything should be in order about the apiary. Let everything be perfectly clean about the hives, the grass and weeds cut from about the entrances, and, if in a locality where the ants bother, the hives should be placed upon a bench with supporting parts that have been tarred, over which the ants will not crawl. The bee-keeper should work with gentleness and care, avoiding jarring movements or anything that will agitate the bees. If the bee-keeper is timid or wishes to protect himself from being stung, he should wear a veil. Care should always be taken that each hive contains a queen. If any are found to be queenless, they should be supplied with brood from some strong colony, or doubled up with a weak colony.

The queen's office is to lay eggs; she is, properly speaking, the mother of the colony, and the only perfectly developed female in the hive. If there is plenty of cells for her use, she will deposit about 3,000 eggs per day, during the best breeding season. The native queen is much darker than the drones or workers, but the Italian queen is brighter than either.

The queen has shorter wings than either workers or drones, with a long, finely tapered abdomen. She has a sting, but will never use it only in combat with a rival queen. A queen can be reared from any egg that will produce a worker. The bees prepare for rearing a queen after the egg is laid, by cutting away the small cells around it and forming a large cell about the shape of a pea-nut about the egg. When a queen is lost, the bees will immediately form a number of these cells. When the first one hatches she will immediately destroy the others, unless prevented from doing so by the workers, in which case she will leave the hive with a portion of the bees, thereby causing them to swarm. This can be prevented by watching, and when the first queen is about to hatch, destroy the others. In about five days after the queen hatches she will leave the hive to meet the drone. This once accomplished suffices for life, and she returns to the hive never to leave it unless with a swarm. The length of a queen's life is from three to five years.

The drones are shorter and more bulky than queens; they are larger than the workers, and make a loud noise when flying; they have no sting, and are physically disqualified from performing any labor; they are reared about the commencement of the swarming season to the amount of a few hundred in each hive; their only duty is to impregnate the young queens, and as soon as the swarming season is over, they are destroyed by the workers. Where there is a large apiary there should only be a small portion of drone-comb left in each hive, and thereby prevent an over-production of drones.

The workers live from 30 to 120 days. Upon them devolves the duty of building combs, supplying the hive with provisions, and protecting the stores. The comb grows in rings on the abdomen of the workers. Each worker is an undeveloped female, and would have been a queen had the cell in which they were reared been large enough. The habits and instincts of the workers are too well known to be further discussed. From the time the egg is laid until the hatching of the bee is, for the worker, about 21 days; the drone, 24 days; and the queen, 16 days. In this climate they breed the entire year, but in colder countries but little brood is found in winter.

When the honey season sets in, you may naturally expect swarming to follow, and after the first swarm issues others should be prevented from issuing for the time being, by watching, and when the first queen-cell is about to hatch, destroy the others; otherwise they may swarm too much and become weak and, without great care, fall a prey to the moth. But the system of dividing colonies is considered better than natural swarming, for by this system the loss of bees by absconding is obviated. The best method of dividing is to take from one to three frames of brood from different hives, according

to strength and liability to swarm, putting empty frames in their places in the old hives, then place the brood so taken in an empty hive, and, near the middle of a nice, warm day, remove some strong colony from its stand and place the new one where the old one stood, so as to catch what bees are in the fields on their return. They can now be left to rear a queen themselves, or be given a queen or queen-cell from a queen-rearing hive. Gainesville, Fla.

For the American Bee Journal.

### The Apiary Near a River.

MAHALA B. CHADDOCK.

I do not believe that it pays to keep bees in Central Illinois unless there is a river near the apiary. Mrs. L. Harrison is on the Illinois river; the Dadants on the Mississippi; I believe Dr. C. C. Miller is on a river, and Mrs. Axtell, of Roseville, is near a river. Speak out, everybody, and let us know.

I have seen letters in various bee-papers from a man named Graves, on Spoon river, that has lots of fall honey nearly every year, when I have none. I have never had but one good fall honey crop since I have kept bees. I do not live near any river. There is goldenrod and some other flowers along the creeks, but the bees never store any honey from them, for me. This fall there is a less amount than usual.

We had a rain (not a heavy one) about three weeks ago—the first that we have had to lay the dust since July 3. The wells are all nearly dry, but the pastures have grown green again. Smart-weed is in bloom, and the bees are working on it. But smart-weed does not amount to much in dry weather.

Vermont, Ills.

Pacific Rural Press.

### Temper of Bees—Plea for Cyprians.

A. NORTON.

The temper of the various races of bees is, perhaps, the principal subject of inquiry by the masses concerning them. With many this makes little difference. In a large apiary run for extracted honey, such as we find in the southern counties of this State, the rapid handling that is generally necessary will render any bee vicious. Bee-keepers get used to it to such a degree that they are as much at home among irritable bees as among gentle ones.

Others, however, desire to find bees that will permit frequent examination without resenting it. Having but few colonies of bees, they can spare the time to handle slowly and gently, and to pet the insects without stint. Unless it be the Carniolans, which I have not seen, it is only a trite statement that Italians in their purity surpass all others for such persons. I



have worked them repeatedly in a yard of ten or a dozen colonies, opening hives and handling all the combs without smoker or veil, and the bees have generally paid no more attention to me than would flies on a window. However, I must say that in such a yard I have had even hybrids so trained to slow handling that I could do likewise. Among the bees in a larger apiary I do not make it a point to venture without both a veil and a smoker.

I have for the past season been handling Cyprians, both pure and hybridized. Imbued as I had been with impressions of their irritability almost beyond the control of the operator, the season's experience has been a constant surprise. While having my smoker ever ready, I have seldom had occasion to use it. Even in taking off the cover from a hive, I seldom have to blow in any puffs of smoke to control them. In taking out combs I have found that the bees remain evenly spread upon them, and they fly but little. I have received but very few stings from Cyprians, except when I have accidentally pinched them.

The queens are easily found, although they are more nervous than Italian queens, as well as smaller, and inclined to be striped. While easily found, they seek the edges of the comb more noticeably than do the Italians.

The crosses between the Cyprians and the blacks are in no respect worse than the Italian hybrids. They vary much, however, in disposition. I find some colonies that I can handle easily, and others that I must subdue with smoke. While in ordinary handling many of these hybrids as well as pure-bloods will remain quietly on the combs, yet a sudden jar is sufficient to dislodge nearly all of them. In handling both pure-bloods and hybrids thus, I have noted that the bees thus thrown into the air immediately start for the entrance, instead of seeking the vulnerable parts of my person, as I expected.

I will say that I have not extracted this year, and this must have made some difference. I have one colony from a Syrian queen mated with a Cyprian drone. Her bees are light yellow, and bear handling much the same as pure Cyprians.

I have handled pure Holy Land bees a little, and their crosses with blacks much more, during former seasons in Mr. R. Wilkins' apiaries in Ventura county. There, in the height of the extracting season, they bore a good comparison with the Italian hybrid bees that were in the same circumstances.

Thus it will be seen that while some find the new races intractable, others find them easily managed. I only add my experience as one in a large column of figures, and I claim for it only its own influence on the general footing up. The Cyprians seem to be very active and excellent honey-gatherers. I do not believe that they can be surpassed.

Gen. J. A. G. Calif.

### Local Convention Directory.

1887. Time and place of Meeting.
- Sept. 22.—Progressive, at Chester X Roads, O.  
Miss Dena Bennett, Sec., Bedford, Ohio.
- Oct. 16.—Kentucky State, at Falmouth, Ky.  
J. T. Connely, Sec., Napoleon, Ky.
- Nov. 16-18.—North American, at Chicago, Ill.  
W. Z. Hutchinson, Sec., Rogersville, Mich.
- Dec. 7-9.—Michigan State, at East Saginaw, Mich.  
H. D. Cutting, Sec., Clinton, Mich.

In order to have this table complete, Secretaries are requested to forward full particulars of time and place of future meetings.—Ed.

### SELECTIONS FROM OUR LETTER BOX

**Cheering Time in Bee-Culture.**—W. A. Whitney, Iroquois, Ont., on Sept. 8, 1887, says:

While bee-keepers of the West seem to have had such a gloomy year in bee-culture, here in eastern Ontario we have had a cheering time. I began with 35 colonies, increased them to 71, and returned a great many second swarms. I have had about 1,200 pounds of honey, mostly clover.

**Poorest Season in 10 Years.**—Chas. Johnston, Sturgis, Mich., on Sept. 12, 1887, writes:

This has been the poorest season that I have experienced in my 10 years of bee-keeping. From 21 colonies, spring count, I have taken but 30 pounds of comb honey, and not that much extracted. The white clover was a failure, but the Alsike yield was very good for a few days. The bees swarmed, and began to work in the sections, but I had to take the sections off and give them empty combs. I use the Heddon improved-Langstroth hive, and his new hive, and practice the contraction method. I would not keep bees in any other hives. We have had about two weeks of good weather, and the bees have enough to winter on, from marsh flowers and buckwheat.

**Poor Season in Massachusetts.**—Wm. W. Cary, Coleraine, Mass., on Sept. 12, 1887, writes:

I reached home last week from the West, and found my bees in nearly a starving condition. The forepart of the season was very good up to bass-wood bloom, which was not more than one-half of a crop. But I thought my bees had honey enough in the hives when I left home (July 27) to winter on, with what they would gather; but it has rained here nearly all the time for the past two months, and the bees have not been able to gather a particle of honey, and the result is I have to feed them all they will have to winter on. It is now cold, cloudy weather, and it rains about every other day, and no prospect of any goldenrod honey, as it will soon be gone. I had a fine visit

in Chicago and Michigan, but I found very little honey anywhere; yet the bees which I saw in Michigan and New York State had a fair amount of honey in their hives for winter. It will cost about \$200 to winter my bees, but I do not complain, but hope for a more even distribution of rain next year, and a good bee-season.

**Make no Change.**—S. J. Youngman, Cato, Mich., on Sept. 4, 1887, writes:

Several times I have been on the point of expressing my views on the new name for extracted honey, and as the theme seems to be now about exhausted, and if not too late, I will state that I think that as far as Michigan is concerned, the present name is a better one than can be found; as I think that there are but few persons but what perfectly understand the word extracted. I have sold honey to a great many persons, and I have never seen but one person that thought that extracted honey meant an "extract of honey." I think that as apian literature increases, as it is fast doing, the people will all be better posted, and no one need think that extracted honey is anything else than pure honey. Let the term stand, by all means.

**Bees in Observatory Hives.**—A. C. Waldron, Buffalo, Minn., says:

I want to make a hive for observation. Will bees work in the light, or must I cover the glass?

[They will work in the light, but prefer to work in the dark and unobserved.—Ed.]

**Verbena.**—H. T. Evans, Townshend, Vt., on Aug. 20, 1887, asks:

Will you please give me the name of the plant that I send? Bees work on it well, and it keeps in bloom a long time.

[The plant is *Verbena hastata*, one of the vervains that have long been recognized as valuable for honey.—T. J. BURRELL.]

**The Drouth and Honey Crop.**—R. M. Osborn, Kane, Ill., on Sept. 10, 1887, writes:

I had 12 strong colonies of bees that wintered on the summer stands in splendid condition. There was plenty of bloom in the early part of the season, but there was but little nectar in it. We had no honey-dew. My bees are Syrio-Italians. The drouth commenced in June, and we in this neighborhood have had only about 2½ inches of rainfall since June 20. On Aug. 25 the thoroughwort commenced blooming, of which there is over 80 acres near my apiary. One of my colonies at this time became queenless, and as there were no drones since June, I united it with another colony. My bees have lost no time in gathering the sweet nectar and pollen from the bloom of the thoroughwort, which

is now in full bloom. The brood-chambers are filled with capped honey in nearly all the 11 colonies, and some are now storing honey in the sections. I do not see anything else to gather honey from, as the pastures are all dried up, and stock is suffering for want of water and feed. The wheat and oats crop was excellent; the corn crop is very short. I have not heard of any surplus honey within a boundary of 5 miles around me, or within 100 miles. I hear that the general complaint is that bees are starving. One man near me had over 30 colonies in the spring, and he has now 3 colonies left. Everybody is discouraged, but I intend to "keep a stiff upper lip," and stand by my bees.

**Bees Doing Poorly.**—Wm. Anderson, Sherman, O., Missouri, on Sept. 13, 1887, writes:

Bees are doing very poorly here. I never saw a year so hard on bees. They have not had enough honey to keep the amount of bees required to make a strong colony. During the summer months the weather was so hot and dry that everything was burned up, and there was nothing for the bees to gather. Half of the bees in this part of the country are dead now, and a hard winter yet in view. I will not get a pound of honey from 50 colonies, and will have to feed for winter. Those who have bees to sell next spring, will doubtless be able to get good prices for them.

**Clipping Queens' Wings.**—Mrs. Josiah Sanborn, Almont, O., Michigan, writes:

I am a new hand at bee-keeping, and stop my bees when swarming, by ringing bells. Some say that is no use, that I ought to clip the queens' wings. Please tell me in the BEE JOURNAL how to do it.

[The day has passed away for beating pans and the like. You can capture swarms by a force-pump and water. Prof. Cook says:

To clip the queen's wing, take hold of her wings with the left thumb and index finger—never grasp her body, especially her abdomen, as this will be very apt to injure her; raise her off the comb, then turn from the bees, place her gently on a board or any convenient object—even the knee will do; she will thus stand on her feet, and not trouble by constantly passing her legs up by her wings, where they, too, would be in danger of being cut off. Now, take a small pair of scissors, and with the right hand open them, carefully pass one blade under one of the front wings, shut the blades, and all is over.

Dr. Miller cuts off both wings on the left side with a small pair of embroidery scissors. Great care should be taken not to cut off a leg also, and to cut off more of the lace than of the fleshy part.—Ed.]



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**THOMAS G. NEWMAN & SON,**  
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923 & 925 WEST MADISON ST., CHICAGO ILL.  
At One Dollar a Year.

**ALFRED H. NEWMAN,**  
BUSINESS MANAGER.

## Special Notices.

**To Correspondents.**—It would save us much trouble, if all would be particular to give their P. O. address and name, when writing to this office. We have several letters (some inclosing money) that have no name; many others having no Post-Office, County or State. Also, if you live near one post-office and get your mail at another, be sure to give the address we have on our list.

As there is Another firm in Chicago by the name of "Newman & Son," we wish our correspondents would write "American Bee Journal" on the envelope when writing to this office. Several letters of ours have already gone to the other firm (a commission house), causing vexatious delay and trouble.

**We will Present Webster's Dictionary** (pocket edition), and send it by mail, postpaid, for two subscribers with \$2. It is always useful to have a dictionary at hand to decide as to the spelling of words, and to determine their meaning.

**Money Orders** can now be obtained at the Post Offices at reduced rates. Five dollars and under costs now only 5 cents. As these are absolutely safe, it will pay to get them instead of the Postal Notes which are payable to any one who presents them, and are in no way safe.

**Red Labels** for one-pound pails of honey, size 3x4½ inches.—We have now gotten up a lot of these Labels, and can supply them at the following prices: 100 for \$1.00; 250 for \$1.50; 500 for \$2.00; 1,000 for \$3.00; all with name and address of apiarist printed on them—by mail, postpaid.

**E. Duncan Sniffen**, Advertising Agent, 3 Park Row, New York, inserts advertisements in all first-class Newspapers and Magazines with more promptness and at lower prices than can be obtained elsewhere. He gives special attention to writing and setting up advertisements in the most attractive manner, and guarantees entire satisfaction. In all his dealings, he is honorable and prompt. Send for his Catalogue of first-class advertising mediums. Mailed free. 52A40t

**A Valuable Book Given Away.**—We have made arrangements by which we can supply the AMERICAN BEE JOURNAL and the New York World—both weekly—for one year, for \$2.10, and present the subscriber with one of these books, bound in Leatherette Free Calf:

**HISTORY OF THE UNITED STATES**—from 432 to 1887.—320 pages.—Price, \$2.00.

**HISTORY OF ENGLAND**—from before the Christian era to 1887.—Price, \$2.00.

**EVERYBODY'S BOOK**—a treasury of useful knowledge.—410 pages.—Price, \$2.00.

The extra 10 cents is for postage on the book, which must be selected by the subscriber at the time of sending the subscription, and cannot be afterwards exchanged.

The book selected will be mailed in a cardboard case, at the subscriber's risk; if lost it cannot be replaced. Be sure to write your name, post-office, county and State plainly, and then the risk of loss is very small. The subscriptions can commence at any time.

Remember, the amount is \$2.10 for both papers, and the Book and postage.

**Sweet Clover**, (*Melilotus alba*), furnishes the most reliable crop of honey from July until frost, and at the same time it furnishes the most delicious honey, light in color, and thick in body. It may be sown in waste places, fence corners, or on the roadside. Sow two years running, on the same land, and the honey crop will be without intermission. Money invested in Sweet Clover Seed will prove a good investment. The Seed may be obtained at this office at the following prices: \$6.00 per bushel (60 lbs.); \$1.75 per peck, or 20 cents per pound.

**Simmins' Non-Swarming System.**—We have received another shipment of these books, and have made such favorable terms, that we will now club them with the BEE JOURNAL for one year, both postpaid, for \$1.25. We can supply all orders by return mail. The subscription to the BEE JOURNAL can be for next year, this year, or may begin anew at any time.

**Enameled Cloth** for covering frames, price per yard, 45 inches wide, 20 cents; if a whole piece of 12 yards is taken, \$2.25; 10 pieces, \$20.00; if ordered by mail, send 15 cents per yard extra for postage.

**Preserve your Papers** for reference. If you have no HINDER we will mail you one for 60 cents, or you can have one FREE if you will send us 3 new yearly subscriptions for the BEE JOURNAL.

**Sample Copies** of the BEE JOURNAL will be sent FREE upon application. Any one intending to get up a club can have sample copies sent to the persons they desire to interview, by sending the names to this office, or we will send them all to the agent.

**Yucca Brushes** are employed for removing bees from the combs. They are a soft, vegetable fiber, and do not irritate the bees. We can supply them at 5 cents each, or 50 cents a dozen; if sent by mail, add 1 cent each for postage.



## Honey and Beeswax Market.

The following are our very latest quotations for honey and beeswax:

## CHICAGO.

HONEY.—We quote: White comb in 1-lb. sections, 18c. No call for dark comb. Offerings are small of all kinds.  
BEESWAX.—23c. H. A. BURNETT, 181 South Water St. Sept. 7.

## DETROIT.

HONEY.—New comb is very scarce, and quoted at 17c@18c. per lb.  
BEESWAX.—23c. M. H. HUNT, Bell Branch, Mich. Aug. 17.

## CLEVELAND.

HONEY.—Best white 1-lb. sold to-day at 17c.; 2-lb., 14c@15c.; dark, 10c@12c. White extracted, 8c.  
BEESWAX.—23c. A. C. KENDEL, 115 Ontario St. Aug. 23.

## BOSTON.

HONEY.—New crop, 1-lb. sections, 18c@20c.; 2-lb. sections, 17c@18c. Extracted, 8c@9c.  
BEESWAX.—23 cts. per lb. Sept. 16. BLAKE & HUFLEY, 57 Chatham Street.

## SAN FRANCISCO.

HONEY.—We quote: Extracted, light liquid, 5c@5½c.; amber colored and candied, 4c@4½c. White to extra white comb, 15c@15½c.; amber, 8c@11c. Receipts light and prices firm.  
BEESWAX.—17c@21c. Sept. 9. SCHACHT & LEMCKE, 123-124 Davis St.

## SAN FRANCISCO.

HONEY.—We quote: White comb, 12c@13c.; extra white comb, 14 to 15c.; dark, 7 to 10c. White extracted, 5c@5½c.; light amber, 4c@4½c.; amber and candied, 4c@4½c. Receipts light; poor crop.  
BEESWAX.—21c@23c. July 25. O. B. SMITH & CO., 423 Front St.

## MILWAUKEE.

HONEY.—Choice 1-lb., 17c@18c.; 2-lb., 15c@16c. White extracted in kegs and barrels, 7c@8c., and in tin cans, 8c.; dark in kegs and barrels, 6c@6½c., in tin cans, 6c@7c. Demand good; supply limited.  
BEESWAX.—23c. Aug. 23. A. V. BISHOP, 143 W. Water St.

## NEW YORK.

HONEY.—We quote: Fancy white in 1-lb. sections, 16c@18c.; the same in 2-lb., 13c@14c.; fair to good 1-lb., 12c@13c., and 2-lb., 10c@12c. Extracted white clover, in kegs and barrels, 7c@8c.  
BEESWAX.—21c@22c. McCALL & HILDRETH BROS., Aug. 24. 28 & 30 W. Broadway, near Duane St.

## KANSAS CITY.

HONEY.—We quote new crop: Choice white 2-lb. sections, 18c.; dark 2-lb., 14c. choice white 1-lb., 18c@20c.; dark 1-lb., 15c. California white, 18c.; dark, 14c. Extracted, white, 8c@9c.; dark, 5c@7c. Market firm; receipts of 1-lb. comb honey light.  
BEESWAX.—20 to 22c. Sep. 14. HAMBLIN & BEARSS, 514 Walnut St.

## KANSAS CITY.

HONEY.—We quote: White 1-lb., 16c@18c.; dark, 15c@16c.; white 2-lb., 15c@17c.; dark, 14c@15c.; California—white 1-lb., 15c@17c.; 2-lb., 15c@16c.; dark 1-lb., 14c@15c.; 2-lb., 14c. Calif. white extracted, 7c@7½c.; dark, 6c@6½c. No white clover in market.  
BEESWAX.—No. 1, 20c@22c.; No. 2, 16c@18c. Aug. 24. CLEMONS, CLOON & CO., cor 4th & Walnut

## ST. LOUIS.

HONEY.—Choice comb, 10c@12c.; latter price for choice white clover in good condition. Strained, in barrels, 4c@4½c. Extra fancy, of bright color and in No. 1 packages, ¼-cent advance on above. Extracted, in bble., 4c@5c.; in cans, 5¼ to 6c. Market very firm at above prices.  
BEESWAX.—21c. for prime. Aug. 2. D. G. TUTT & CO., Commercial St.

## CINCINNATI.

HONEY.—We quote for extracted, 3c@7c. per lb. Comb honey has been sold out perhaps better than ever before at this time, only remnants of dark honey being left. Choice white would readily bring 15c. in a jobbing way.  
BEESWAX.—Fair demand.—20c@22c. per lb. for food to choice yellow. Aug. 18. C. F. MUTH & SON, Freeman & Central Av.

## NEW YORK.

HONEY.—We quote: Fancy white 1-lb. sections, paper boxes, 17c@19c.; fancy 1-lb., glassed or un-glassed, 17c@18c.; fancy 2-pounds, glassed, 14c@16c. Lower grades 16c@20c. per lb. less. Buckwheat 1-lb., paper boxes, 11c@12c.; same glassed or un-glassed, 10c@11c.; 2-lb., glassed, 9c@10c. Extracted, white, 7c@8c.; dark, 5c@6c. Demand large.  
Aug. 30. F. G. STROHMEYER & CO., 122 Water St.

## OUR CLUBBING LIST.

We supply the American Bee Journal one year, and any of the following publications, at the prices quoted in the last column of figures. The first column gives the regular price of both. All postage prepaid.

	Price of both.	Club
The American Bee Journal .....	1 00..	1 00..
and Gleanings in Bee-Culture .....	2 00..	1 75
Bee-Keepers' Magazine .....	1 25..	1 20
Bee-Keepers' Guide .....	1 50..	1 40
The Apiculturist .....	2 00..	1 75
Canadian Bee Journal .....	2 00..	1 75
Rays of Light .....	1 50..	1 35
The 7 above-named papers .....	5 25..	4 50
and Cook's Manual .....	2 25..	2 00
Bees and Honey (Newman) .....	2 00..	1 75
Binder for Am. Bee Journal .....	1 60..	1 50
Dzierzon's Bee-Book (cloth) .....	3 00..	2 00
Root's A B C of Bee-Culture .....	2 25..	2 10
Farmer's Account Book .....	4 00..	2 00
Western World Guide .....	1 50..	1 30
Heddon's book, "Success" .....	1 50..	1 40
A Year Among the Bees .....	1 75..	1 50
Convention Hand-Book .....	1 50..	1 30
Weekly Inter-Ocean .....	2 00..	1 75

One yearly subscription for the AMERICAN BEE JOURNAL must be ordered with each paper or book, in order to take advantage of the prices named in the last column.

**Conventions.**—The time for holding Bee-Keepers' Conventions will soon be here, and we cannot give any better advice than this: Let each one attend who can do so, and take part in making these meetings interesting and instructive. If you have not already obtained the "Bee-Keepers' Convention Hand-Book," do so at once to post yourself up on how to conduct such meetings correctly. It contains a simple Manual of Parliamentary Law and Rules of Order for the guidance of officers and members of of Local Conventions—Model Constitution and By-Laws for a Local Society—Programme for a Convention, with Subjects for Discussion—List of Premiums for Fairs, etc. Bound in cloth, and suitable for the pocket. Price, 50 cents. We will club this book and the AMERICAN BEE JOURNAL for one year for \$1.30.

**Will you Exhibit at the Fair?** If so, we will supply you all the copies of the BEE JOURNAL that you may desire to distribute to the bee-keepers you may meet there. We also have colored posters to put up over exhibits of honey, wax, supplies, etc. Send for them early, so as to be sure to have them on hand in time. They will cost you nothing, but we should like to have you get up a club for the BEE JOURNAL, if you can possibly do so.

**We have a few Sets of the BEE JOURNAL** for the present year, and can fill orders until further notice, for all the numbers from the first of last January. New subscribers desiring these back numbers, will please to state it plainly, or they will not be sent.

**Should any Subscriber receive this paper** any longer than it is desired, or is willing to pay for it, please send us a postal card asking to have it stopped. Be sure to write your name and address plainly. LOOK AT YOUR WRAPPER LABEL.

We are sometimes asked who our authorized agents are. Every subscriber is such an agent; we have no others, and we greatly desire that each one would at least send in the name of one new subscriber with his own renewal for 1888. The next few weeks is the time to do this. We hope every subscriber will do his or her best to double our list of subscribers.

**Mr. J. E. Pond's** address will be in the future, North Attleboro, Bristol Co., Mass.

**We have a large quantity of CHOICE WHITE EXTRACTED HONEY**, in kegs holding from 300 lbs. to 225 lbs. each, which we will deliver on board the cars at 10 cents per lb. Orders solicited.

**Queens.**—We can mail a Tested Italian Queen (bred for the best results as well as for beauty) for \$2.00; Untested Queens, \$1 each, or \$0.00 per dozen. Orders solicited.

**We pay 20 cents per pound**, delivered here, for good Yellow Beeswax. To avoid mistakes, the shipper's name should always be on each package.

**Colored Posters** for putting up over honey exhibits at Fairs are quite attractive, as well as useful. We have prepared some for the BEE JOURNAL, and will send two or more free of cost to any one who will use them, and try to get up a club.

**We Supply Chapman Honey-Plant seed** at the following prices: One-half ounce, 50 cents; 1 ounce, \$1; 2 ounces, \$1.50; 4 ounces, \$2; ½ pound, \$3; 1 pound, \$5. One pound of seed is sufficient for half an acre, if properly thinned out and re-set.

## Advertisements.

## FOR SALE in CALIFORNIA.

ON account of the death of the proprietor, Mr. J. D. ENAS, a RANCH of 240 Acres, partly Fruit—50 Colonies of Bees, Steam Machinery for the manufacture of Supplies for bee-keepers (a well-established business). The Land will be sold in 40 or 80 acre tracts. Also, Stock, the Farming implements, and a large stock of Apianian Supplies. For particulars, address

MRS. J. D. ENAS, (P. O. Box 300).  
38A3t NAPA CITY, CALIFORNIA.

## COMB HONEY WANTED.

**WE** should be pleased to correspond with any one having COMB HONEY For Sale. We sell on Commission at best market prices. Address,

S. T. FISH & CO.,  
189 South Water St., CHICAGO, ILLS.  
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## \$200 CASH

**WILL** buy a Complete Apiary consisting of 18 Colonies of Bees in Root chair-hives, 16 in Root ¼-story Simplicity hives; 24 Comb-Honey Crates to go in Simplicity hives; 1,500 1-lb. Sections; 150 extra combs in wired frames, several extra hives, 1 Novice Honey-Extractor, and everything to make an Apiary complete. All hives nearly new and well painted (white). This is a bargain.

Address, T. BOOS, Kinmundy, Ills.

## HOW TO WINTER BEES,

**ELEVEN** Essays by eleven prominent bee-keepers, sent by mail for 10 cents.  
Address, HENRY ALLEY,  
11A3t Wenham, Mass.

## The NEW Heddon Hive.

We have made arrangements with the inventor by which we shall make and sell the Heddon Reversible Hive, both at wholesale and retail: nailed and also in the flat.

The brood-chamber is in two sections: also the surplus arrangement, which may be interchanged or inverted at will. The cover, bottom-board, and top and bottom of each sectional case has one-half of a regular bee-space, so that the surplus cases with the sections, may be placed between the two brood-chambers, or the latter may be transposed or inverted—in fact, all parts of this hive are perfectly interchangeable. The brood-frames will ALL be bored for wires.

A SAMPLE HIVE includes the bottom-board and stand: a slatted honey-board, and cover: two 6-inch brood-chambers, each containing 3 frames: two surplus arrangements, each containing 28 one-pound sections, one with wide frames and separators, and the other without separators. This latter chamber can be interchanged with the other stories, but cannot be reversed. It is NAILED AND PAINTED, and ready for immediate use. Price, \$4.00, complete.

**THOMAS G. NEWMAN & SON,**  
923 & 925 West Madison St., CHICAGO, ILL.

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More than 50 pages, and more than 50 fine illustrations were added in the 8th edition. The whole work has been thoroughly revised, and contains the very latest in respect to bee-keeping. It is certainly the fullest and most scientific work treating of bees in the World. Price, by mail, \$1.25. Liberal discount to dealers and to clubs.

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High Side Walls, 4 to 14 square feet to the pound. Wholesale and Retail. Circulars and Samples free

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## Muth's Honey Extractor,

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P.S.—Send 10c. for Practical Hints to Bee-Keepers

## BY RETURN MAIL!

SIX Warranted Italian Queens..... \$5.00  
Fourteen Warranted Italian Queens..... 10.00  
Safe arrival guaranteed.  
30Atf H. ALLEY, Wenham, Mass.

## HOW TO RAISE COMB HONEY,

PRICE 5 cents. You need this pamphlet, and my free Bee and Supply Circular. 31Atf  
OLIVER FOSTER, Mt. Vernon, Linn Co., Iowa.

## "Boss" One-Piece Sections,

MANUFACTURED BY

**J. Forncrook & Co., Watertown, Wis.**



Patented June 28, 1881.

WE will furnish you SECTIONS as cheap as the cheapest. Write for price-list.  
Watertown, Wis., May 1st, 1887.

Thos. G. Newman & Son, of Chicago, sell the one-piece Sections manufactured by us.

**Dadant's Foundation Factory, wholesale and retail.** See advertisement in another column.

## QUEENS FOR BUSINESS

UNTIL further notice, I will send by return mail, safe arrival guaranteed, Good QUEENS from my best strains noted for gentleness and honey-gathering qualities, viz:

1 Queen..... \$0.80  
6 Queens..... 4.50  
12 Queens..... 8.00

Address, **WM. W. CARY,**  
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